ORIGINAL

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C.

In the Matter of	)	
	)	
Digital Broadcast Copy Protection	)	MB Docket No. 02-230
	)	
	)	
	)	

COMMENTS OF THE IT COALITION

James M. Burger
M. Anne Swanson

Dow, Lohnes & Albertson, PLLC
1200 New Hampshire Avenue, N.W.
Suite 800
Washington, DC 20036
(202) 776-2000

December 6, 2002

Table of Contents

SUMMARY

The Business Software Alliance and the Computer Systems Policy Project (together the "IT Coalition"), by their attorneys, hereby submit their comments in response to the Commission's Notice of Proposed Rulemaking, which seeks comments on the need for a regulatory content protection scheme for digital broadcast television and proposes adoption of the "broadcast flag" standard, upon which consensus was reached earlier this year in the BPDG's discussions.

As set forth in these comments, that consensus among representatives of the consumer electronic, information technology, motion picture, cable, and broadcast industries represented a "high level" agreement in principle. The participants agreed that a broadcast flag could technically be used to trigger content protection for programming broadcast by DTV television stations and that objective criteria should be established if constraints are applied to output and recording technologies. The group did not reach consensus on any of the details for these criteria and on the process for applying them to and selecting among output and protection technologies.

While the IT Coalition supports those elements of the BPDG report on which such a substantial consensus was reached, many of its member companies have significant reservations regarding numerous other issues related to mandated implementation of the broadcast flag or any other DTV content protection system. Not only is such implementation made difficult by the complex and ever evolving nature of the technologies involved, but the Commission's own governing statute does not give it delegated authority to act in the DTV content protection area. Any attempt the agency

makes to adopt such rules based on its general "public interest" authority must be supported by **a** clearly documented need, which, as described below, frankly does not exist. Given these technological and legal complexities, as indicated in the *BPDG Final Report,* the information technology industry believes that, if the FCC concludes it has jurisdiction and determines that broad protection mechanisms are necessary, a preferable approach is to *make* clear that broadcasters may protect or encrypt DTV content at the source of its transmission rather than after the signals have already been transmitted "in the clear." Accomplishing encryption at the source would require a number of actions and certain adjustments in technology, as would implementation of the broadcast flag, but if the goal is effective content protection, encryption at the source is the most effective solution.

The IT Coalition believes that, given marketplace realities, the FCC lacks evidence that DTV content is being withheld because of the absence of a copy protection regime. Indeed, the fall 2002 line-up of network programming is replete with digital programming, and the heads of all four major television networks have represented in writing to Chairman Michael Powell that they have fully embraced his call to provide such programming. The Chairman himself has recently acknowledged their success in providing digital content.

As further explained in these comments, the broadcast flag standard upon which the BPDG participants agreed is not itself a content protection mechanism. Once broadcasters insert the flag into their digital signals, nothing further happens without a system designed to detect and respond to the flag, a system that equipment and software

manufacturers must build into their products. Any broadcast flag regulation that the FCC decides to adopt should be limited to specifying how the flag is to be embedded, requiring tuners to look for the flag, and establishing sufficiently specific objective, technical, and licensing criteria[1] to enable device manufacturers to develop and deploy compliant solutions to manage the received broadcast content.

If it regulates in this area, the Commission will also need to promulgate effective rules to guide developers to ensure that their products perform within the parameters of the objective, technical and licensing criteria. Robustness standards -- which delineate the level of effectiveness of the technology -- should be aimed at the ordinary consumer, not an expert, determined hacker and expressed in terms of frustrating circumvention of the system. If the FCC determines that it must also oversee output and recording technologies, it should establish objective, technical and licensing criteria that would permit the development of multiple compliant implementations and should not select a particular solution. Such standards should be satisfied through self-certification and, to ensure competition has a chance to develop, should not become effective until a minimum number of solutions has been certified and manufacturers have had sufficient

[1] Throughout this document, use of the phrase "objective, technical, and licensing criteria" is not intended to preclude the establishment of other means of selection, such as marketplace acceptance, as agreed by affected parties. The information technology industry continues to develop additional methods for selecting technologies based on two key concepts: establishing objective functional criteria for protection and formulating marketplace based self-certification rules. The IT Coalition has discussed its approach with a number of affected parties, and it is cautiously encouraged by the responses that have been received.

time to incorporate the compliant solutions in their products. In addition, the Commission should ensure that, under any new protection scheme, programming that enhances civic discourse and promotes the public interest remains available to citizens without restriction.

Finally, any scope of protection that the FCC defines to govern its new content protection scheme should prevent unauthorized access to marked digital terrestrial broadcast television content by the public. The goal should be to promote consumer acceptance of DTV, not create disincentives to its adoption. The scope of protection is best defined in terms of who may access a copy in usable form, rather than when, how, where, and what copies may be made. This concept of scope has been successfully employed in the DVD CSS context. Under this approach, while it is actually possible to make unlimited copies of scrambled DVD discs, such copies are unusable without an authorized decryption key.

Defining the scope as preventing the unauthorized access to marked digital terrestrial broadcast television by the public would have a number of benefits. First, it would promote the ability of consumers to continue enjoying DTV as they enjoy analog TV today. Second, it would ensure that product manufacturers are not unreasonably burdened by costs passed on to consumers. Third, it will ensure that DTV home networking will be innovative and stimulate the demand for DTV, thereby accelerating the transition from analog to digital broadcasting. The IT Coalition supports this definition and believes it strikes a reasonable balance between protecting DTV content from unauthorized access and unduly impeding consumer adoption of DTV.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of:	)	
	)	
Digital Broadcast Copy Protection	)	MB Docket No. 02-230

COMMENTS OF THE IT COALITION

I. Introduction

The Business Software Alliance ("BSA"), and the Computer Systems Policy Project ("CSPP") (together, the "IT Coalition") by their attorneys, hereby submit their comments in response to the *Notice of Proposed Rule Making* released in the above-referenced proceeding.[2]

Since 1988, BSA has been the voice of the world's software, hardware, and Internet sectors before governments and with consumers in the international marketplace. Its members represent the fastest growing industry in the world. BSA educates computer users on software copyrights and cyber security, advocates public policy that fosters innovation and expands trade opportunities, and fights software piracy. BSA's members include Adobe, Apple, Autodesk, Bentley, Borland, CNC Software/Mastercam, Dell, Entrust, Hewlett-Packard, IBM, Intel, Intuit, Macromedia, Microsoft, Network Associates, Novell, Sybase, Symantec, and Unigraphic Solutions (an EDS company), as well as other companies.

[2] Digital Broadcast Copy Protection, *Notice of Proposed **Rule** Making*, MB Docket No. 02-230, FCC 02-231 (rel. Aug. 9,2002) ("*NPRM*").

CSPP is a public policy advocacy group comprised of the Chairmen and Chief Executive Officers from America's leading information technology companies. CSPP members include Michael Dell of Dell Computer Corporation, Craig R. Barrett of Intel Corporation, Carly Fiorina of Hewlett-Packard Company, Christopher Galvin of Motorola Corporation, Lars Nyberg of NCR Corporation, Samuel J. Palmisano of IBM Corporation, Joseph Tucci of EMC Corporation, and Lawrence **A.** Weinbach of Unisys Corporation. CSPP provides recommendations on public policies with a transformative impact on society, including digital rights management, export controls, international trade, privacy and Networked World infrastructure and access.

The IT Coalition is gravely concerned about piracy and committed to fighting it. BSA estimates that its members lose $11 billion to software pirates annually.[3] Indeed, BSA was established to fight piracy worldwide, and all the constituencies represented by the IT Coalition continue to deplore those that pirate copyrighted works. Individually and collectively, BSA's members and the companies represented by CSPP spend considerable resources pursuing pirates that illegally copy and distribute members' copyrighted products. In addition, BSA and CSPP support strong intellectual property laws both domestically and globally, and BSA helps governments identify and prosecute pirates. Accordingly, the IT Coalition is sensitive to the general concerns about unauthorized redistribution of broadcast programming that have been expressed by the

[3] International Planning and Research Corp., Seventh Annual BSA Global Software Piracy Study (2002).

motion picture industry, and the IT Coalition is pleased to contribute its considerable expertise to analysis of this issue.

The IT Coalition, for reasons detailed below, is skeptical of proposals asking the government to mandate technological measures that will burden device manufacturers in an effort to protect broadcast programming. The IT Coalition and the constituencies it represents have consistently advocated intra- and inter-industry efforts relying on open standards, private agreements, market forces, public education, and enforcement of existing copyright law as preferable to government regulation of information technology devices. If the Commission decides to promulgate rules related to content protection, any scheme it adopts must be as narrow as possible so as not to discourage innovation, and it must convey significant countervailing public interest benefits that outweigh the burdens that may be imposed on technology and consumers

II. FCC Efforts To Adopt a Content Protection Scheme Are Fraught with Jurisdictional Complications and Should Only Proceed Once the Agency Has Tangible Proof of a Problem and Is Convinced a Broadcast Flag Is the Best Alternative

A. The FCC Lacks Jurisdiction To Regulate in the Content Protection Area

The NPRM in this proceeding specifically requests comment on jurisdictional issues? Regulating rights management of broadcast content by the devices that receive and handle broadcast signals is a matter of first impression for the Commission. The Commission has specific delegated authority to adopt rules and regulations for the management and use of spectrum, but no provision of the Communications Act

[4] *NPRM* at ¶ 10.

authorizes it to regulate the protection of intellectual property rights for DTV signals. Furthermore, there is no demonstrated public interest need or problem within the Commission's sphere of delegated authority that would justify the FCC's reliance on its "ancillary" jurisdiction under Section 1 of the Communications Act.[5] Absent specific statutory authority or a documented public interest need, any attempt by the FCC to regulate the content protection of DTV signals "turns the notion of a delegated agency on its head."[6]

The provisions in the Telecommunications Act of 1996 (the "1996 Act") that relate to digital television do not authorize the FCC to regulate the content protection of DTV signals. The 1996 Act dealt comprehensively with the establishment of a new digital television service, or what was referred to at the time as "advanced television service." Its specific provision on DTV, codified as Section 336 of the Communications Act, directed the FCC to adopt regulations addressing licensee eligibility to hold DTV authorizations; the provision of ancillary or supplementary services, such as data, that might be offered in addition to digital video; the eventual surrender of analog television licenses; and fees for ancillary or supplementary services.' Nothing in this section specifically addresses content protection of DTV signals. Neither did the legislative

[5] 47 U.S.C. § 151 (2001).

[6] Implementation of Video Description of Video Programming, *Report and Order*, 15 FCC Rcd. 15230, 15274 (2001) (Com'r Powell, dissenting in part and concurring in part), *recon. denied*, 16 FCC Rcd. 1251 (2001), *vacated*, *Motion Picture Ass 'n.of America v. FCC*, No. 01-1149 (D.C. Cir., Nov. 8,2002).

[7] 47 U.S.C. §§ 336(a)-(c) & (e) (2001).

history of the section ever mention content protection or any involvement by the FCC in protecting intellectual property rights.

Subsequent legislative tweaking of Section 336 has established a new low-power Class A television service as well as conditions for terminating the DTV transition, specified restrictions related to the early return of unused spectrum allotments, and conferred rights to paired analog-digital allotments on certain parties that arguably had not been originally eligible for such allocations.[8] None of these adjustments ever touches upon the subject of content protection

While some have argued that two subsections of Section 336 confer sufficiently broad authority on the FCC to support its regulation of DTV content protection; close examination of the actual structure of the provisions and their specific terms demonstrates that Congress did not intend the FCC to regulate in this area. Sections 336(b)(4) and (b)(5), which have been cited to justify such authority, provide as follows:

> (b) *In prescribing the regulations required by subsection (a) of this section,* the Commission shall -- . . .
>
> (4) adopt such technical and other requirements as may be necessary or appropriate to assure the quality of the signal used to provide advanced television services, and may adopt regulations that stipulate the minimum number of hours per day that such signal must be transmitted; and

[8] *See, e.g., id.* §§ 336(f) & 309(j)(14); Auction Reform Act of 2002, Pub. L. No. 107-195, § **6,** 116 Stat. 715; Public Health, Security, and Bioterrorism Preparedness and Response Act of 2002, Pub. L. No. 107-188, § 531, 116 Stat. 594.

[9] Letter from Representatives W.J. "Billy" Tauzin and John D. Dingell to The Honorable Michael K. Powell (July 19,2002).

> ***(5)*** prescribe such other regulations as may be necessary for the protection of the public interest, convenience, and necessity.'"

Section 336(b)(4), by its terms, is plainly limited to the adoption of regulations assuring the quality of the DTV signal." Section 336(b)(5) in much broader terms directs the FCC to prescribe regulations "necessary for the protection of the public interest, convenience, and necessity."" Both sections, however, are qualified by prefatory language, as italicized above, which makes clear that their mandates relate to the FCC's adoption of regulations that are specifically required by Section 336(a) of the Act. That section, in turn, limits the FCC to determining eligibility standards for DTV authorization holders, a matter that is no longer in issue, and adopting regulations that allow DTV licensees to offer such ancillary or supplementary services as may comport with the public interest, convenience and necessity." Given these specific limitations in Section 336(a), the

---

[10] 47 U.S.C. §§ 336(b)(4) & (5) (2001) (emphasis supplied)

[11] Indeed, the House Committee Report that explains the provision, which first appeared in the House version of the legislation, focuses solely on the Commission's authority to adopt rules regulating signal quality. See H. Rep. No. 104-204 (Part I) at 117 (1995), *reprinted in* 1996 U.S.C.C.A.N.10, 84 *(emphasis supplied).* ("Paragraph (b)(4) requires the Commission to adopt any technical or other requirements *necessary to assure* ***signal*** *quality* for ATV … The Committee intends that the Commission continue to *ensure the quality of the ATV signal* that consumers will be receiving."). It is simply bootstrapping to claim that the Commission's authority to regulate the quality of the signal, which the Commission historically has regulated in terms of radiated power, signal strength, power levels, antennae heights, and similar physical metrics, means that the Commission has authority to regulate the nature of the content carried by the signal, and then, as a derivative of that claim, to assert jurisdiction over the intellectual property rights associated with that content. That is a stretch built upon a leap.

[12] 47 U.S.C. § 336(b)(5) (2001).

[13] *Id.* § 336(a).

references in Section 336(b)(4) and (b)(5) to promulgating rules relating to signal quality and adoption of "such other" necessary regulations cannot be expanded to include content protection of DTV.

In guiding the development of DTV services, the FCC apparently has also reached the conclusion that these provisions are to be interpreted narrowly. In its *Report and Order* implementing fees for the provision of ancillary or supplementary services, the FCC said, with regard to Section 336(b)(5), that "Congress gave the Commission discretion to prescribe such other regulations *with respect to ancillary or supplementary services* 'as may be necessary for the protection of the public interest, convenience, and necessity.'"[14] In other words, the FCC itself expressly restricts Section 336(b)(5) to ancillary or supplementary services.

Lacking specific delegated statutory authority, the FCC, were it to adopt regulations pertaining to DTV content protection, would need to rely on its general "public interest" authority under Section 1 of the Communications Act."[15] In this section, Congress provided that it is the purpose of the FCC to "regulat[e] … communication by wire and radio so as to make available . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service."[16] To accomplish this goal, the Communications Act empowers the FCC to "[m]ake such rules and regulations and prescribe such

---

[14] Fees for Ancillary or Supplementary Use of Digital Television Spectrum, *Report and Order*, 14 FCC Rcd 3259,3260 (1998) (emphasis supplied).

[15] 47 U.S.C. § 151 (2001).

[16] *Id.*

restrictions and conditions . . . as may be necessary to carry out the provisions of this chapter, or any international radio or wire communications treaty or convention."[17]

In the past, the FCC has occasionally used this general public interest authority to regulate in areas "ancillary" to its clearly enumerated powers. The best example is the early regulation of cable television. In *U.S. v. Southwestern Cable Co.*, 392 U.S. 157, 178 (1968), the United States Supreme Court found that the FCC's initial attempts to regulate cable carriage of broadcast signals were not only permissible under the agency's general authority to regulate "'all interstate ... communications by wire or radio"' but "imperative," as the FCC had argued, for the effective performance of the agency's responsibilities related to the regulation of television broadcasting.[18] In that case and others, however, the FCC justified the extension of its jurisdiction into a new industry or field by citing an over-arching public interest need for such regulation, a need that was not being met by the operation of market forces or otherwise. In this case, the rationale for assertion of jurisdiction and intellectual property issues urged by the content providers is disproven by their own words and performance."'

---

[17] *Id.* § 303(r); *see also id.* § 154(i) ("The Commission may perform any and all acts, make such rules and regulations, and issue such orders, not inconsistent with this chapter, as may be necessary in the execution of its functions.").

[18] *See also U.S. v. Midwest Video Corp.*, 406 U.S. 649 (1972).

[19] See Section II.B., *infra*. Very recently, the United States Court of Appeals for the District of Columbia Circuit invalidated the FCC's attempt to rely on Section 1 of the Communications Act to support its adoption of video description rules. *Motion Picture Ass'n of America v. FCC*, No. 01-1149 (D.C. Cir., Nov. 8, 2002). In 2000, the FCC had relied on its general public interest mandate to adopt such rules which make television more accessible to the visually disabled. Implementation of Video Description of Video Programming, *Report and Order*, 15 FCC Rcd. 15230, 15251 (2000), *recon. denied*, 16 FCC Rcd 1251 (2001). On review, the court found that the FCC lacked any explicit

Prior to initiating this proceeding, the FCC had neither ruled on the merits of the content holders' concerns nor stated a willingness to propound digital television broadcasting content protection rules based on their rationale. Although FCC opinions exist that make reference in passing to the need to resolve content protection issues before the transition to digital broadcasting can proceed, these rulings do not provide details or substantiation of any overarching need for copy protection for digital television signals. The various reports and orders contain only brief references to the lack of a record regarding digital broadcast encryption or point to FCC rulings on copy protection issues in the cable context.'"

---

statutory authorization to adopt the rules, and, because they implicated program content and amounted to forced speech, the agency could not rely upon its general public interest authority to support their adoption.

[20] *See, e.g.,* Compatibility Between Cable Systems and Consumer Electronics Equipment, *Report and Order,* 15 FCC Rcd 17568, 17580 (2000) ("To the extent that commenters . . . are raising issues relating to encryption of over-the-air DTV transmissions by broadcast licensees, we believe that the record is insufficient to come to a conclusion."); *see also* Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming, *Eighth Annual Report,* CS Docket No. 01-129, 25 Com. Reg. (P&F) 818, 845 (2002), which without any citation or support, claimed that the lack of a comprehensive copy protection regime has slowed the DTV transition; Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming, *Seventh Annual Report,* CS Docket No. 00-132, 16 FCC Rcd. 6005, 6052-53 (2001). This 2001 report noted that several unresolved issues had impeded the digital television transition. Referring to copy protection as a "point of contention" that "the Commission continues to monitor," the FCC cited only its *Declaratory Ruling* on copy protection in navigation devices. *See* Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, *Further Notice of Proposed Rulemaking and Declaratory Ruling,* 15 FCC Rcd 18199, 18203-04, 18211 (2000). That proceeding did not address the issue of copy protection for over-the-air digital broadcasts. Notably, in that cable-related proceeding, the FCC did not mandate copy protection for commercially available navigation devices, or even endorse a particular encryption method specified in the POD-Host Interface Licensing

Thus, the FCC has never received explicit or even implied authority to act in this area, and it has previously not found a documented need to do so. Mandating such a regime at this time would represent a significant extension of the FCC's public interest authority into an area of law in which all principles are established under an entirely different statutory regime created by the Copyright Act and related authority.[21] As a consequence, the Commission would lose any deference its decision would otherwise generally enjoy from a reviewing court.[22]

Not only would establishing a copy protection regime exceed the FCC's explicit statutory authority, but drafting administrative regulations and then acting on a daily basis to enforce them would take the FCC into areas for which it currently lacks both legal expertise and an assembled cadre of enforcement personnel. The Commission can avoid such a regulatory quagmire by heeding its Chairman's admonition not to regulate in an area unless it has clearly delegated authority over such matters." In doing so, the Commission can rest assured that there is another government body, the Copyright Office, which is charged with responsibility for digital copyright matters.[24]

Agreement developed by an industry consortium. Rather, it ruled that the private licensing scheme did not violate the agency's navigation device rules.

[21] Indeed, the Copyright Act is replete with provisions conferring responsibility for digital copyright matters on the Copyright Office and the Department of Commerce. ***See,*** *e.g.*, 17 U.S.C. §§ 1201(a)(1)(C) & (D) and 1201(g)(5); P.L. 105-304, Title 1, §104, 112 Stat. 2876.

[22] ***See,*** *e.g.*, *National Ass'n of Gov't. Employees v. FLRA*, 179 F.3d 946,950 (D.C. Cir. 1999) ("[W]e do not defer when [the agency] interprets statutes and regulations outside its domain.").

[23] Partial dissent of then Commissioner Powell, *supra*, note 6.

[24] ***See*** *supra* note 21

B. There Is No Evidence That DTV Content Is Being Withheld Because of a Lack of Protection

As a threshold question, the NPRM inquires "whether quality digital programming is now being withheld because of concerns over the lack of digital broadcast copy protection."[25] As noted in the preceding section, the answer to the Commission's question is fundamental to a legal justification of this proceeding. In addition, an affirmative answer to the NPRM's question will have a far-reaching and detrimental effect on numerous constituencies. If a broadcast protection rule is promulgated, technology companies are likely to spend significant sums complying with the rule, and consumers in turn will be forced to buy more expensive products. The content industry insists that their sole consideration is ensuring that their content is not stolen, and that potential increased costs are justified because a copy protection scheme will provide rights holders with the assurance they need to begin making digital programming available. The IT Coalition, however, finds no evidence to support the proposition that DTV content is today being withheld. Indeed, as the fall 2002 line-up of network programming demonstrates and statements from broadcast network leaders attest, there is no dearth of DTV content.

Last spring, in response to announcement of the Chairman's plan for voluntary industry initiatives to spur DTV adoption,[26] four senior network officials outlined their proposals for providing value-added primetime DTV programming during the 2002-2003

[25] *NPRM* at ¶ 3.

season. The Walt Disney Company's Chairman and Chief Operating Officer wrote, "the ABC Television Network has accepted your challenge to provide HDTV programming for at least 50% of its prime time schedule during the 2002-2003 season."" Indeed, ABC's fall 2002 primetime schedule has included 13.5 hours a week of HDTV programming, or sixty-four percent of the network's primetime schedule."

Similarly, last spring, Viacom's President and Chief Operating Officer wrote the Chairman that "[w]hen it comes to providing American consumers with high quality, high definition and value-added DTV programming, Viacom has needed no prodding."[29] As of this fall, the statement seems absolutely correct. All of CBS' fall 2002 primetime programming has been digital, and some eighty-one percent of that is HDTV.'"

With **like** sentiment, News Corporation's President and Chief Operating Officer also praised the Chairman's plan for boosting the DTV transition, noting that "the FOX network will continue to provide Enhanced Definition 480p digital television

---

[26] Letter from Michael K. Powell, Chairman Federal Communications Commission, to Senator Ernest F. Hollings, Chairman Senate Committee on Commerce, Science and Transportation (April 4, 2002).

[27] Letter from Robert A. Iger, The Walt Disney Company, President and Chief Operating Officer, to Michael K. Powell (May 30, 2002).

[28] "BSA Digital Television Compendium – December 2,2002" ("*BSA Programming Compendium")*, attached as Appendix A, at 2 and "ABC 2002-2003 Primetime Season" chart.

[29] Letter from Mel Karmazin, Viacom Inc., President and Chief Operating Officer, to Michael K. Powell, Chairman Federal Communications Commission (May 22, 2002).

[30] *BSA Programming Compendium* at 2 and "CBS 2002-2003 Primetime Season" chart. CBS also broadcasts the daily soap opera "The Young and the Restless" in HDTV. *Id.*

programming during *100%* of our prime-time schedule, as well as ***Fox*** *News Sunday.*"" An analysis of the Fox networks' fall 2002 schedule shows such to be the case:"

Finally, NBC's Vice Chairman and Executive Officer also told the Chairman earlier this year that, "NBC will increase its HDTV programming in prime time and late night by approximately 133% from ***6*** hours in 2002 to 14 hours next season."" Again, NBC's fall 2002 program schedule shows NBC has come close to approximating that goal.[34]

As Chairman Powell acknowledged earlier this fall in his remarks to MSTV'S DTV Update Conference, these are not the statements and actions of organizations withholding quality digital programming. In his remarks, the Chairman applauded the industry's response to his call for cooperation in accelerating the DTV transition: "[W]e crafted a voluntary plan to speed the transition and I am proud to say that industry has responded."[35] He noted six ways in which "great strides" had been made in advancing the transition, three of which specifically related to the increased availability of digital content:

---

[31] Letter from Peter Chemin, News Corporation, President and Chief Operating Officer, to Michael K. Powell, Chairman Federal Communications Commission (June 25,2002).

[32] *BSA Programming Compendium* at *2* and "Fox 2002-2003 Primetime Season" chart.

[33] Letter from Robert Wright, National Broadcasting Company, Chairman and Chief Executive Officer, to Michael K. Powell, Chairman Federal Communications Commission (June 20, 2002).

[34] *BSA Programming Compendium* at 2 and "NBC 2002-2003 Primetime Season" chart. Specifically, NBC broadcasts at least 11.5 hours per week in HDTV, 9.5 hours of which are in primetime. *Id.*

[35] Remarks of Chairman Michael K. Powell at the Association for Maximum Television DTV Update Conference, Oct. 22, 2002, Washington, D.C., at 3.

- High definition content on the broadcast networks is up about 50% during prime-time.

- There's more HD content on cable and satellite, such as Disney's 24-hour HD channel. Premier sporting events like the Olympics and the NCAA are broadcast in HD.

- More HD sports are on the way. ESPN HD will launch next April. Monday Night Football will he in HD next year as will the Super Bowl, the NBA Finals, and the NHL Stanley Cup."

Clearly, lack of programming is not restraining the DTV transition since the vast majority of primetime television is already offered in high quality digital.[37] Absent definitive evidence of a problem, the Commission should think long and hard before intervening in the operation of the marketplace by imposing mandates on lawful devices. The substantial industry investment and consumer expense that would follow such a decision must he based on a documented need and not merely on unfounded rationales that are belied by statements and program offerings from the same organizations.

[36] *Id.* at 4

[37] Many other problems affect the transition, including the high price of DTV sets, the difficulty of receiving over-the-air DTV signals, the expense and problems associated with erecting new DTV broadcasting facilities, and the fact that most Americans' primary TV connection is cable or satellite, and neither carries all the local digital channels. In addition, a recently released General Accounting Office report highlighted that few American consumers are aware of the DTV transition and that Americans are generally not well informed about DTV products. Staff of U.S. General Accounting Office, *Telecommunications: Additional Federal Efforts Could Help Advance Digital Television Transition,* Report to the Ranking Minority Member, Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, House of Representatives (GAO-03-7), November 2002, at 15-19.

C. Given Jurisdictional Difficulties and the Lack **of** Any Demonstrated Need, the Technology Industry Would Prefer That the FCC Signal Its Agreement That Broadcasters May Encrypt DTV Content at the Source

As referenced in the *NPRM,* since 1996, an inter-industry group called the Copy Protection Technical Working Group ("CPTWG") has served as a discussion forum for general copy protection issues." Late last year, the Broadcast Protection Discussion Group ("BPDG") was formed under the auspices of CPTWG specifically to address digital broadcast copy protection. Operating under a tight deadline, the BPDG participants evaluated solutions based on the broadcast flag signaling system for preventing the unauthorized redistribution of DTV content." The BPDG participants agreed that the broadcast flag could be used to signal the need to protect DTV content in

---

[38] *NPRM* at ¶ *2*

[39] *BPDG Final* ***Report*** at § 1.6. Initially, one of the BPDG participants, the Motion Picture Association of America ("MPAA"), had insisted on a February 15, 2002 deadline for completion of the BPDG evaluation, a mere two and one-half months after the BPDG organizational meeting. Letter from Jack Valenti, President and Chief Executive Officer, Motion Picture Ass'n of America, to Gary Shapiro, President, Consumer Electronics Ass'n, and Rhett Dawson, President, Information Technology Industry Council (December 14, 2001). The BPDG work plan set March 31, 2002, as the target for completion of BPDG's evaluation of the Broadcast Flag proposal, four months after formation of BPDG. "The co-Chairs recognize that the work of the BPDG has been undertaken in a compressed timeframe . . . . [W]ith more time or additional resources, perhaps we could have enhanced the timing and operation of the project." *Id.* at § 2.9. Given the timing and the complexity of the issues, the BPDG participants were unable to agree upon many topics, including the scope of protection. ***See*** *infra* Section III.F. In addition, the task of the BPDG was not to make policy recommendations: "A number of questions raised in the course of the BPDG discussions related to enforcement and related policy issues. There was general agreement that such questions, while highly pertinent to any decisions as to how a broadcast protection method should be implemented, are not appropriately addressed by the BPDG." *BPDG Final Report* at § *0.5.*

digital form.[40] The BPDG participants also agreed that protection could begin after the transmission was demodulated and that the demodulated ATSC Transport Stream could be protected while inside the initial receiver.[41] In addition, they agreed that, upon application of transport stream processing inside the receiver, the flag could be read and any content marked as protected would continue to be protected within the receiver.[42] Finally, the BPDG participants reached a "high level" consensus on an outline of protection for the digital output and recording of marked content. As discussed below, however, BPDG participants were unable to agree on specifics related to such

During the BPDG negotiations, the computer industry as an initial matter had proposed encrypting DTV prior to transmission, a proposal it made in good faith, based

---

[40] *Id.* at § 4.1.

[41] *Id.* Prior to broadcast of a DTV signal, the broadcaster inserts 32-bits representing the flag into the Program and System Information Protocol ("PSIP"). At this point, the program video is a separate MPEG-2 stream. These two streams (as well as audio, other data and, if a multicast, other audio and video streams) are all mixed together in the ATSC Transport Stream, modulated, and broadcast. After the receiver processes the ATSC Transport Stream, the flag "disappears" because it is not embedded in the content. Thus, after processing, the receiver will need to keep track of content associated with the flag, so that it continues to be protected. Today, virtually all receivers contain the Transport Stream Processor. That processor sorts the ATSC stream back into the individual components, i.e., MPEG-2 video, AC-3 audio, and data. It is at this point that the broadcast flag can be read in the data streaming from the processor. Innovative designs or other design requirements may lead some manufacturers to locate the Transport Stream Processor outside the receiver. In that case, the BPDG participants agreed that the unprocessed Transport Stream could continue to be protected while in digital form until the application of transport stream processing.

[42] *Id.*

[43] *BPDG **Final Report*** at § 5.

on its extensive experience in protecting digital content.[44] The greatest threat to any digital content occurs whenever such content is exposed in the clear. Despite this danger, the BPDG Report did not endorse encryption at the source and instead recommended adoption of the broadcast flag system, which would permit broadcasters to transmit unprotected DTV content as an initial matter. To try to minimize any potential disclosure risks from unencrypted transmission, the BPDG participants recommended robustness rules for protecting such content inside the receiver."

If, contrary to the arguments in Section II.A. above, the FCC determines that it has delegated authority in this area, the consensus that was reached in the BPDG

"The *BPDG Final Report* at § 1.6 n.3 states, "[i]t was suggested that a more effectual technical and enforcement solution would be to encrypt DTV content at the source (*i.e.*, the transmitter). Given the current political and business environment, this approach was rejected by motion picture studios and broadcasters, as well as by representatives of consumer electronics manufacturers, in favor of the approach reflected in the presentation."

Concern has also been expressed that consumers may actually be able to circumvent the ATSC flag system by the time it is fully implemented. Currently, such a system depends on demodulation of the ATSC digital signal by a dedicated chip that can only be fabricated in an expensive semiconductor foundry, so the FCC would be able to identify and regulate the manufacturers of hardware demodulators if the agency chose to do so. Today, such regulation might be effective, but such effectiveness is not likely to last. About 4 GHz of processing power is currently required to demodulate the ATSC signal in software. The 3.06 GHz P4 processor is the most powerful CPU available. According to Moore's Law, however, processor power doubles every 18 months. (The semiconductor industry has been exceeding that number for awhile.) In less than 18 months, a 5 GHz processor will likely be available. Thus, by the time the ATSC flag system can be implemented, consumer products may be able to bypass the system by downloading non-compliant software from the Internet. Protection at the source would be a better solution.

[45] *BPDG Final Report, Requirements for the Protection of Unencrypted Digital Terrestrial Broadcast Content Against Unauthorized Redistribution, Final Discussion Draft* (June 3, *2002)* §§ X.7 – X.11. ("*Requirements Document")*

discussions does not foreclose the FCC from now indicating that it prefers protection at the source for DTV transmissions. This approach would eliminate the danger of unprotected demodulation of DTV signals. In addition, encryption at the source would make industry negotiated consensus solutions similar to that unanimously agreed to by the consumer electronics, movie, and computer industries in the case of DVDs, easier to achieve.[46] Such an approach would relieve the Commission of making decisions that may

[46] In the case of DVD CSS, despite initial calls from some parties for a government mandate and a signaling proposal similar to the Broadcast Flag, the industries were able to reach unanimous agreement on adoption of a content protection system that protects DVD content at the source, *i.e.*, in the media distributed to the public. For a description of the decision to reject a government mandate, *see* Dana Parker, *DVD Copy Protection: An Agreement At Last?* DVD Report, http://www.tapediscbusiness.comlissues/l996/1096/featprotection.html (last visited Dec. 6,2002). Under DVD CSS, a manufacturer must obtain keys from the DVD Copy Control Association ("CCA") that, once installed in products, allows them to read and users to view the content on protected discs. To obtain the "keys," a manufacturer enters into a license agreement pursuant to which it commits to build compliant products designed reasonably to protect the content. Retail reports reflect the success of this industry agreement. Launched slightly before DTV, DVD players are now in some 30 million US households. *State ojthe Industry*, 42 Consumer Electronics 9 (October 14, 2002). Last year, DVD disc sales totaled $4.6 billion dollars, and sales and rentals are expected to rise to $10.6 billion by year's end. Bruce Orwall *et. al.*, *DVD Gains on Tape, but Economists Have Hollywood Studios in a Tizzy,* The Wall Street Journal, Feb. 5, 2002, **A-1;** James Greenberg, *The Would-Be King of DVD*, The New York Times, Nov. 24,2002, BU-2. In creating a protection system for DVD, the industries agreed upon a system that achieves protection without interfering with product functionality and without raising prices for the consumer. By developing DVD content that could only be accessed by licensed products, the three industries (motion picture, consumer electronics, and computer) created a technical specification and enforcement system governed by the three industries. Their cooperation in developing specifications and content protection rules facilitated the fastest growth ever of a new consumer electronics product. Because the governance structure provides for consensus among the industries, no one industry can force a specification or rule change on the other industries. **As** a result, changes thal unreasonably burden the consumer or unreasonably weaken protection will not be adopted, and new output technologies that are in all three industries' interest can be adopted to further spur the DVD market.

best be left to the market and would remove any need for the agency to interpret copyright law, action it lacks authority to undertake.

III. If the FCC Promulgates DTV Content Protection Rules, It Should Establish Objective, Technical, and Licensing Criteria for Content Protection But Not Select a Particular Compliant Solution

While the BPDG participants were unable to agree on encryption of content at the source, they did reach full consensus in endorsing use of a broadcast flag and requiring demodulated content to be protected until the receiver reads the flag. The most contentious issues before the BPDG involved how, when, and where DTV content could be moved, stored, and viewed by consumers beyond the initial receiver. These issues were directly raised by a proposal before the BPDG that digital outputs and digital recording devices be limited to "authorized technologies." Such "authorized technologies" would be used by "covered products" to record and output marked content. The BPDG participants could not reach agreement, however, on the specifics of authorizing any technology.[47]

To implement a broadcast flag protection scheme, the Commission, as discussed below, will need to adopt specific rules to build on this very "high level" consensus that the BPDG participants reached. If the Commission determines that it must ovcrscc management of content protection of material originally provided through DTV broadcasts, it should establish objective, technical, and licensing criteria for content

[47] *BPDG Final* ***Report*** at § ***6.1.***